

### **Amendments to the Specification:**

Amend paragraph [0008] as follows:

[0008] The measuring device is further preferably pivotably attached to the arm. This permits the measuring device to have an improved contact on the surfaces of a cavity which are to be examined. This is particularly the case if the surfaces to be examined run in an inclined or arcuate manner. The measuring device may then be pivoted relative to the arm so that it may be brought optimally into contact or into an optimal position to the surface to be examined.

According to one preferred embodiment of the invention the measuring device is attached on the arm in a freely pivotable manner so that it ~~may be contacted onto~~ contacts the surface to be examined in a ~~self-acting~~ self-adjusting manner.

Amend paragraph [0009] as follows:

[0009] The pivot axis about which the measuring device is pivotable relative to the arm preferably extends normally to a pivot plane in which the arm is pivotable relative to the shank. In other words, the pivot axis about which the measuring device is pivotable relative to the arm is fixed parallel to the pivot axis about which the arm is pivotable relative to the shank. This permits the measuring device to be able to be brought into an optimal contact or position to the object to be examined at any angular position of the arm relative to the longitudinal axis of the shank. The arm in its second position is located at different angular positions depending on the diameter or inner cross section of the cavity to be examined, in order to correspondingly adapt the distance of the measuring device to the longitudinal axis of the shank. In order despite this to be able to always align the measuring device at a predefined angular position relative to the surface to be examined, for example parallel to the longitudinal axis of the shank, the measuring

device is pivotable about an axis parallel to the pivot axis of the arm or normal to the pivot plane of the arm.

Amend paragraph [0038] as follows:

[0038] The measuring device 20 at the same time is freely movable about the pivot axis 18. Furthermore the center of gravity of the measuring device 20 in the vertical direction is located below the pivot axis 18 so that the measuring device 20 always attempts to align itself in the vertical direction. This has the advantage that if the arm 14 is brought into the extended position parallel to the longitudinal axis X, the measuring device likewise aligns in this extended position parallel to the longitudinal axis X in a ~~self-acting~~ self-adjusting manner. Furthermore this arrangement of the center of gravity of the measuring device 20 favors the bearing of the measuring device 20 on the inner wall of the cylinder 2, as is to be seen in Figures 2 and 3.

Amend paragraph [0039] as follows:

[0039] In the example according to Fig. 2, on pivoting out the arm 14 due to the ~~self-acting~~ self-adjusting vertical alignment of the measuring device 20, firstly the lower counter bearing 40 on a first end of the measuring device 20 comes into contact with the inner wall of the cylinder 2. If then the arm 14 is pivoted further, wherein the angle  $\alpha$  is enlarged, the pivot axis 18 moves further to the inner wall of the cylinder 2 until it likewise comes into contact with the inner wall of the cylinder 2. If both counter bearings 40 and 42 are in contact with the inner wall, the measuring device 20 bears completely on the inner wall of the cylinder so that a measurement of the surface roughness may be carried out on the inner wall.